Neonicotinoid Proposed Interim Decisions

This effort reflects collaboration between RD, BEAD, EFED, HED and PRD, and chemical teams for all 4 neonics from each division. The interdivisional team met regularly to discuss assessment progress, methods and make sure that the assessments addressed PRD's needs.
The assessments conducted by EFED and BEAD were highly refined.

Outline

- Overview
- Risk Management Approach
- Bee Risks and Benefits
- Bee Risk Mitigation
- Other Ecological Risk Mitigation
- Human Health Mitigation
- Other Considerations
- Next Steps

Overview

Nitroguanidine-substituted neonicotinoids (includes: imidacloprid, clothianidin, thiamethoxam, and dinotefuran) are:

- A class of systemic insecticides registered for foliar (ground and air), soil, seed, and tree injection applications to a wide variety of agricultural crops
- Non-agricultural uses include turf, ornamentals, flea treatment for pets, wood preservative, poultry house, and other residential and commercial indoor/outdoor uses
- Most poundage applied as seed treatment for corn and soybean

Chemical	Est. annual usage (lbs/yr)	Major uses (lbs/year)
Clothianidin	1,500,000	**Corn** (seed treatment; 1,400,000)
Imidacloprid	1,120,000	**Soybean** (seed treatment, 430,000) **Cotton, Potato, Wheat** (all app. methods, 100,000 ea.)
Thiamethoxam	919,000	**Corn** (seed treatment; 300,000) **Cotton** (foliar, soil, seed; 160,000) **Soybean** (seed treatment; 300,000)
Dinotefuran	22,500	**Cantaloupes** (5,000) **Rice** (foliar; 4,000)

Overview

USEPA Regulatory history

- Registration review began in 2008 with imidacloprid, then others in 2011
- Public concern over pollinator issues related to incidents and honey bee losses (2008)
- Label revisions implemented – advisory "Bee Box", pollinator restrictions for Ag and non-Ag products (2013)
- Hold placed on new uses to outdoor pollinator attractive crops (2015)
- 12 thiamethoxam/clothianidin voluntary product cancellations as a result of an ESA lawsuit (March 2019)

States

- States have passed legislation that address neonic issues
  - MD, VT, and CT; restricted homeowner use
  - OR banned use on certain trees
  - NJ required beekeeper notification
  - CDPR requires risk management plan by 2020
- Many states have implemented state-wide pollinator protection plans (MP3s); AAPCO maintains inventory

International

- EU – banned on all outdoor use (2018)
- Canada – seed licensing requirements (2015); proposed cancellation of all outdoor uses for aquatic risk (2018); prohibited foliar and soil application for certain uses (e.g., pome fruit, stone fruit, tree nuts, cucurbits) for pollinator risk (2019)

Let's make sure our verbal intro to this slide hits hard on incidents and neonics in the media

Canada's seed licensing requirements: https://www.ontario.ca/page/neonicotinoid-regulations-seed-vendors

Overall Risk Management Approach

Risk Management Priorities

- Human Health Risks of Concern (residential and occupational)
- Ecological Risks of Concern
  - Pollinators (bees) – from multiple use sites
  - Birds and Mammals – from consuming treated seed
  - Aquatic Invertebrates – mainly from foliar application to multiple uses

Early Stakeholder Engagement

- Goals
  - To inform risk assessments and understanding of exposure to bees
  - To better understand benefits of uses preliminarily identified with risks of concern
- Stakeholders: Federal and state partners (USDA, OPMP; SFIREG, AAPCO, and NASDA; IR-4; Growers; Registrants; Other Stakeholders (American Hort, NALP, NPMA)

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Questions?

EFED Back-pocket Slides

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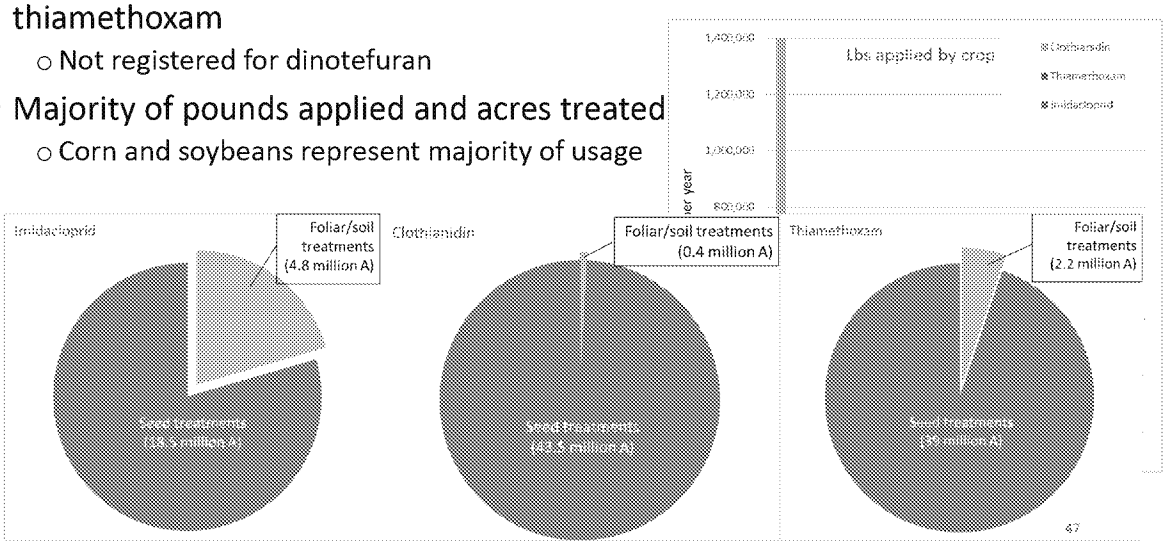
Seed treatments: Use and Usage

- Registered for variety of crops on imidacloprid, clothianidin and thiamethoxam
  - Not registered for dinotefuran
- Majority of pounds applied and acres treated
  - Corn and soybeans represent majority of usage



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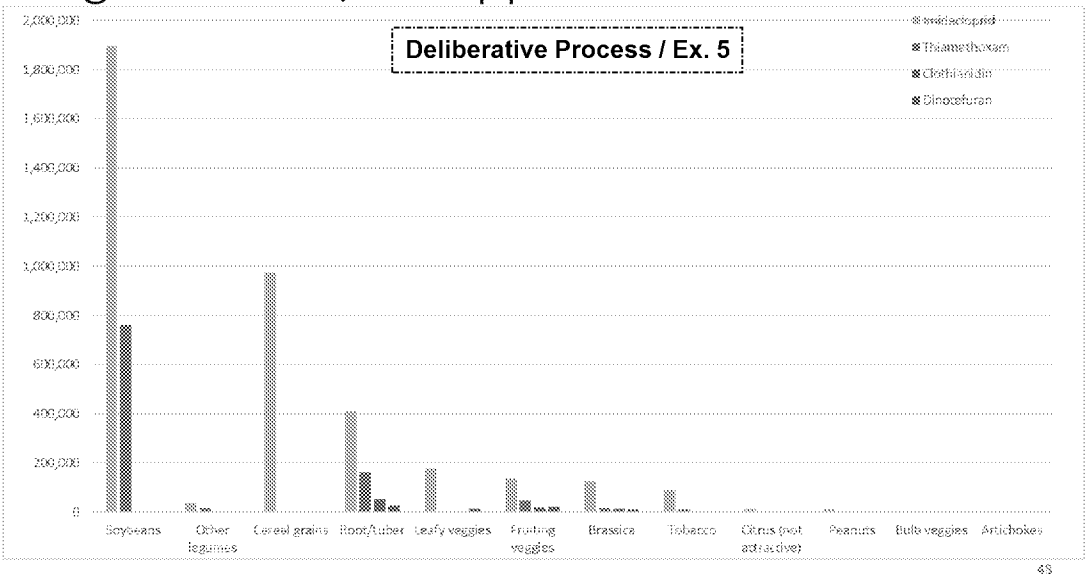
Usage for foliar/soil applications



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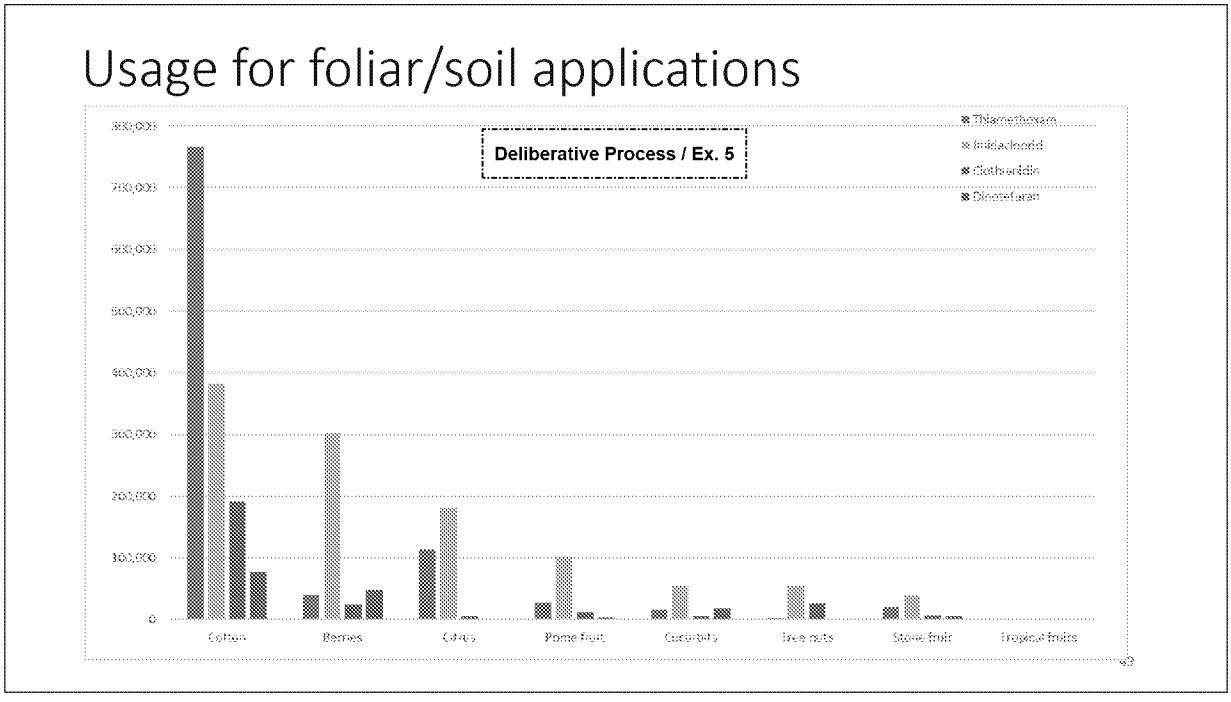

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EFED Neonicotinoid Chemical Teams

Chemical	EFED Branch	Eco	Fate
Clothianidin	ERB 6	Michael Wagman	Chuck Peck
Thiamethoxam (combined document)	ERB 1	Kris Garber Ryan Mroz	Chris Koper
Imidacloprid	ERB 5	Keith Sappington Meghann Niesen Hannah Yingling	Mohammed Ruhman
Dinotefuran	ERB 3	Elizabeth Donovan	Rochelle Bohaty
Coordination and supporting roles		Colleen Rossmeisl Frank Farruggia Monica Wait	

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